

DOKTORSKÝ STUDIJNÍ PROGRAM

NÁVRH TÉMATU/PROPOSAL OF THEME

Studijní program/*Study Program*: **Zemědělská specializace**

Studijní obor/*Branch of Study*: **Využití a ochrana přírodních zdrojů**

Katedra/*Department of*: **vodních zdrojů**

Školitel (včetně titulů), email/*Supervisor*, email: Prof. Ing. Svatopluk Matula, CSc.

Konzultant (včetně titulů)/*Co-supervisor*:

Forma studia/*Form of Study*: **prezenční**

Typ tématu/*Type of Theme*: **Rámcové**

Téma/Theme:

An universal methodology for calibration and testing of soil water content and soil water potential sensors

Hypotéza/Hypothesis:

Differences of various sensors to measure soil water content and soil water potential for different soils, different installations and with respect to variable agri-treatments and variable calibration procedures might be generalised and included into one more generally acceptable methodology.

Anotace/Annotation:

The up to date sensors of soil water content and potential measurements will be tested, calibrated in the laboratory and in situ using procedures already partly known and partly developed as completely new in use. The ways of installations, soil heterogeneity, variability of particle size distribution, bulk density, structure, salinity and other chemical properties of soils, vegetation cover, soil treatment, soil compaction and other agri-treatments have to be included. The testing will be done on field research station of the Dept. and other field localities and in the laboratory. The already measured data sets and lysimetric data from the small lysimeters will be included in this work. The work will include the data sets from the previous lysimetric measurements from the field station. Developed and evaluated sensors, methods of calibration and testing will be implemented into the amelioration research in the frame of NAZV Grant project.

Zdroj financování/Source of: NAZV QK1910086

Datum/*Date*: 29.1.2020

Podpis/*Signature*: